

ABSTRACT

An object is to provide a wave power generator which can convert wave energy to electric energy with high efficiency and supply electric power of a large capacity at low cost and has a simple structure and is low in construction cost.

The wave power generator includes a heavy body 3 elastically supported by air springs 4 as elastic members in an enclosing wall 2 on a floating body 1 and an electromagnetic damper as a generating means 7 provided between the heavy body 3 and the floating body 1. The spring constant of the air springs 4 is adjustable by providing auxiliary tanks in the piston 6 and the floating body 1 so that the undamped natural frequency of the air spring is equal to or close to the frequency of waves within a predetermined frequency ratio ω/ω_0 . Thus, the frequency of the spring system resonates with the frequency of waves, so that the relative movement of the power generating means 7 increases to a maximum and power generation is carried out with maximum efficiency.